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FARM SURPLUSES AND FOOD NEEDS

by

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FARM SURPLUSES AND FOOD NEEDS

MOUNTING ACCUMULATIONS of surplus farm commodities place the United States in the curious position of fearing that the 1959 harvest will be as good as the record harvest of 1958. Yet half of the world's population is underfed and American crop surpluses, while costly to the taxpayer, still fall far short of amounts that would be required if world needs for food and fiber were satisfied.

In a special message to Congress on Jan. 29, President Eisenhower coupled a request for revision of price support legislation with a plea for greater use of food surpluses for relief of hungry people abroad—"in short, using food for peace." Secretary of Agriculture Ezra Taft Benson disclosed on Feb. 12 that he was undertaking discussions with other countries on disposal of surplus products and that the first talks would deal with wheat, the commodity in greatest over-supply.

The United States has engaged since World War II in numerous global feeding operations. However, the programs have been hemmed in by numerous technical restrictions; while helpful in feeding some hungry people in different parts of the world, they have not prevented a growing pile-up of certain commodities in this country. The administration has not yet offered concrete proposals for speeding the flow of surplus commodities abroad. Benson said any new developments would be along the line of existing programs. "We would like to see how present programs might be improved and whether new approaches might be devised."

RECORD ACCUMULATION OF SURPLUSES IN 1959

Thirty years of government effort to hold up farm prices by limiting agricultural production, at a minimum loss of freedom to the farmer, have failed to solve the nation's problems of excess supply. The President told Congress in January that "Despite acreage allotments and marketing

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quotas, despite a large soil bank program, and despite massive surplus disposal, government investment in farm commodities will soon be at a new record high." Secretary Benson has described the surplus situation as "fantastic and indefensible."

At the end of last year, the inventory of the Commodity Credit Corporation, consisting of farm products acquired through price-support operations, included 777 million bushels of wheat, nearly 1.2 billion bushels of corn, and 1.6 million bales of cotton. Additional large stores of these commodities had been pledged as collateral against loans to farmers, and a large part of those stores was destined to be added to the inventory in 1959.

Surplus stocks of wheat are expected to reach 1.5 billion bushels by mid-year. This is about the amount harvested in 1958, to which was added a carry-over from the previous year of 881 million bushels. The nation consumes about 610 million bushels a year; last year about 400 million bushels were exported. According to the Secretary of Agriculture, the country's supply of wheat is so large that there would be enough for all domestic uses, export sales and foreign donations in the year ahead, plus ample carry-over, even if not a single bushel were harvested this season.

The total supply of feed grains for the 1958-59 season has been estimated at 246 million tons, 12 per cent more than in the preceding year. The corn supply of around 3.5 billion bushels is 9 per cent ahead of last year's supply, and a corn carry-over of more than 1.8 billion bushels is in prospect.

The Department of Agriculture reported in January that the volume of cotton placed under loan was larger than in any year except 1953 and 1955 when the crops were considerably bigger. The supply of dry beans is substantially larger than last year. Soybean production was so high that a carry-over of about 90 million bushels is anticipated on Oct. 1, compared with about 20 million bushels last October. Potatoes also are in over-supply. Anticipated increases in the supply of hogs may bring pressure to put them under price supports.

Changes in acreage limitations made by the Agricultural Act of 1958 may result in larger plantings of corn and cotton this year. Farmers have already planted 45 million

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C.C.C. INVESTMENT IN SURPLUS COMMODITIES, DEC. 31, 1958 (all figures in millions)

Commodity	Stocks in inventory		Stocks pledged as collateral	
	Quantity	Cost	Quantity	Value
Wheat	777 bu.	\$2,192	473 bu.	\$865
Corn	1,168 bu.	2,037	248 bu.	314
Cotton, upland...	2 bales	226	5 bales	867
Grain sorghum...	161 cwt.	408	101 cwt.	189
Tobacco	—	—	955 lbs.	613
Soybeans	13 bu.	30	96 bu.	197
Others	—	554*	—	222
Totals		5,447		3,267

* Includes \$295 million in miscellaneous commodities and \$259 million in strategic materials.

SOURCE: Agriculture Department statement, Feb. 6, 1959.

acres of winter wheat, nearly one million more acres than last year. Corn farmers voted in a referendum on Nov. 25 to scrap acreage limitations and go under a new system of price supports geared to market prices rather than to the old parity principle.¹ Secretary Benson, chief author of the new corn support program, expects it eventually to bring corn production more closely into line with market demand.

EXTENT OF PUBLIC INVESTMENT; STORAGE COSTS

The Commodity Credit Corporation has reported that its total investment in price-supported commodities amounted on Dec. 31 to \$8.7 billion; \$5.4 billion represented the cost to the government of commodities already owned outright, and the remaining \$3.3 billion represented the amount of loans to farmers against commodities held as collateral. In addition, C.C.C. had negotiated "purchase agreements" obligating it to buy \$24.7 million worth of various commodities at support prices if offered by producers at stipulated future dates. Benson told the House Agriculture Committee on Feb. 10 that he expected the government investment in surplus commodities to exceed \$10 billion by July 1; the anticipated accumulation of wheat alone represented \$3.5 billion of the estimated total.

Government investment in surplus commodities has risen

¹ Under the new system the price of corn will be supported at 90 per cent of the average market price in the preceding three years, or at a price equal to at least 60 per cent of parity. Parity is a price estimated to be equivalent in purchasing power to the price received by the farmer in a specified base period, usually 1909-14 or 1910-14 with certain adjustments.

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steadily over the past half-dozen years with the exception of 1957, when increased disposal of surpluses abroad reduced the inventory. When President Eisenhower took office in January 1953, the investment was slightly under \$3 billion. It rose to a record high of \$8.9 billion in February 1956, fell to \$6.7 billion in August 1957, and then began a climb which still continues.

Storage costs are enormous. Benson has estimated that they will reach an annual rate of \$1 billion later this year. It already costs about \$450,000 a day to hold surplus wheat stocks, and the wheat storage bill may run up before long to \$700,000 a day, or a quarter of a billion dollars a year. Storage facilities are available for 6.7 billion bushels of grain, more than twice the capacity of eight years ago, but if 1959 crops are as large as last year's, new storage facilities may be needed.

The government investment does not represent a net expenditure, because disposal operations bring in some return. During the six-month period ended Dec. 31, 1958, C.C.C. disposed of price-support commodities which cost it \$1.2 billion to acquire, hold and transport, and the amounts received reduced the net outlay to around \$368 million. The total loss on price-support and disposal operations in the fiscal year ended June 30, 1958, exceeded \$1 billion, but the annual average net loss in the five-year period that ended on that date was \$913.2 million. Before World War II, annual losses averaged \$7.7 million; during the war the program resulted in annual average gains of \$25.2 million; in the following years, up to mid-1953, annual losses averaged \$168 million. C.C.C. borrowing authority has been increased five times since 1948, when Congress set the ceiling at \$4¼ billion; the limit was last raised in 1956 to \$14½ billion.

CURRENT PROGRAMS FOR DISPOSAL OF SURPLUSES

The C.C.C. attempts to recover as much as possible of its initial outlays by selling commodities in domestic and overseas markets. It is authorized also to make commodities which it cannot sell available for disposal under various programs to aid the needy at home and abroad. Surplus commodities go without cost, first, to supply school lunch programs, second, to feed the needy in institutions, and then to help individuals on state welfare rolls. Various amounts are donated to international agencies and to

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American voluntary groups doing relief work both in the United States and abroad. Specific allotments are made also from time to time for emergency relief of areas in acute distress in this country or in foreign countries.

A total of 1.5 billion pounds of surplus foods—chiefly wheat, flour, corn, corn meal, rice, non-fat dry milk, and cheese—were given away through the various domestic outlets (including American agencies doing relief work abroad) in the six months ended Dec. 31. Surplus foods benefited 14 million school children, 1.4 million persons in institutions in every state and territory, and more than 5 million needy individuals in 44 states.² Surplus foods were received also by flood victims in Indiana, Ohio, and Texas, by drought-stricken populations in Ghana and Lebanon, and by political refugees in Austria. Wheat was sent to Tunisia to be used as partial compensation of workers on special projects to relieve unemployment.

Other major surplus disposal operations outside of normal trade channels include sales for foreign currency and barter transactions. Operations of that kind were authorized by the Agricultural Trade Development and Assistance Act of 1954, more commonly referred to as Public Law 480. Since the program was started, a total of \$4.3 billion has been laid out for the purchase, handling and transportation of surplus commodities for which \$3 billion in foreign exchange was received. The foreign currencies are earmarked for special uses abroad, many of which are for the benefit of friendly nations; hence the program is essentially a foreign assistance rather than a foreign sales operation.

Barter transactions involve contracts between C.C.C. and private U.S. business firms, which agree to make delivery of certain foreign materials needed for national defense. Barter exports of agricultural commodities in the last half of 1958 had an export value of \$44.3 million. Between July 1, 1954, and Dec. 31, 1958, agricultural commodities exported under barter agreements had an export value of \$967 million, and the value of materials received for the strategic stockpile and to meet other critical needs was \$798 million.

Despite the size and the cost of these programs, sur-

² The number of individuals in family units receiving donated foods in December 1958 ranged from only 607 in North Carolina to more than 800,000 in Pennsylvania.

pluses have continued to pile up. In a memorandum to the President, accompanying a semi-annual report on Public Law 480 operations, Clarence Francis, chairman of the Interagency Committee on Agricultural Surplus Disposal, observed last July 31:

I wish I could say that as a result of operations under this authority our surpluses were declining or that they could be expected to reach more manageable proportions in the near term. I am, however, persuaded otherwise. . . . The probability is that our surpluses will continue to be substantially above any normal or desirable carry-over for at least the next five years, even if Public Law 480 operations continue at the current rate for that period.

The report noted that the country had tended to look upon its problem of surpluses as a temporary one and added "We would do well to base our thinking and planning on longer-range considerations."

Government Attacks on Surplus Problem

AGRICULTURAL SURPLUSES have been a common thing in this country, but it is only in comparatively recent times that they have become so large and so burdensome to the taxpayer. In the late 19th century, American farmers sold abroad everything they produced that was not sold at home. They often dumped such large quantities on foreign markets that prices were depressed to ruinous levels, but supply and demand came into better balance in the early years of the 20th century. Increases in population and growth of industrial prosperity more than compensated for a reduction in foreign demand during this period.³

World War I put a tremendous spur to agricultural production in this country. A renewed demand for American produce came from the European belligerents, whose own farm output was drastically curtailed or whose usual sources of supply were cut off by hostilities. After the war, however, European nations lacked the means to buy more than minimum amounts of American agricultural products. Service on the war debts owed this country ab-

³ Demand fell because of efforts by European countries to become self-sustaining, and because of their preference for trading with countries that afforded growing markets for their manufactured goods.

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sorbed a large share of their dollar resources, and increased American tariffs on manufactured goods impaired their ability to earn additional dollar exchange. Furthermore, food-exporting nations like Argentina and Australia, whose surplus had banked up during the war because of shipping shortages, re-entered the European market in competition with the United States.

Loss of foreign outlets for American agriculture coincided with the general business slump of 1921-22. Farm prices fell sharply and did not recover when the remainder of the economy began to boom. But it was not until the depression of the 1930s that the economic distress of the American farmer came to be identified with an imbalance between supply and demand. For the first time, fear of surplus supplanted fear of scarcity.

CROP CONTROL MEASURES IN PEACE AND WAR

Government programs to shore up farm income by purchasing surplus commodities and holding them off the market were instituted under the Agricultural Adjustment Act of 1933 as temporary measures to meet an emergency. The effect looked for was a gradual adjustment of supply to demand and eventual establishment of equitable prices in a relatively free market. Attempts were made from the beginning to stimulate consumption of farm products, but the principal effort was to keep production in check. It was hoped that supply and demand could thereby be brought sufficiently into balance to sustain a reasonable economic return to the farmer.

The droughts of 1933-36 bankrupted many farmers but eased the surplus problem considerably. Emphasis then shifted to soil conservation and to strengthening price maintenance measures. Under legislation enacted in the mid-1930s, price support was linked closely with production control, and farmers received cash payments for putting land aside for conservation purposes.

Advent of World War II made the objective a rapid increase of production to meet abnormal demands. Farmers were given incentives to step up output, extensive new acreage was put into cultivation, and the price problem became not to hold up prices but to hold them down.

Demand grew so strong that some farm prices, even under controls, pushed up above parity. Anticipating a

sharp falling off of demand with attendant price breaks at the end of the war, Congress provided in the Stabilization Act of 1942 for support of most farm prices at 90 per cent of parity for two years after hostilities ceased. However, the expected slump failed to materialize in 1945 or 1946. Domestic demand remained active during the period of reconversion, and a large foreign demand was made effective by postwar relief programs and by loans and grants extended under the Marshall Plan.⁴ Surpluses began to pile up again toward the end of the decade of the 1940s, but outbreak of war in Korea in 1950 refreshed the demand for farm products.

By mid-1953, when the Korean armistice was signed, American agriculture was producing at record high levels and stocks began to accumulate once more. Congress attempted to meet the situation by enacting legislation to attack the problem at both ends. One measure established acreage allotments and marketing quotas on major crops; another (Public Law 480) opened new outlets for disposal of surpluses at less than cost. But the surpluses continued.

EFFORTS TO EXPAND COMMODITIES CONSUMPTION

Over the years the government has tried a number of different approaches to speed disposal of farm products in surplus supply. During the 1920s, most of the proposals put forth to aid the farmer aimed at expansion of exports. In the first few years of the depression, barter deals and extension of credits on foreign sales facilitated disposal of some stores of wheat. Congress in 1932 also donated 85 million bushels of wheat and 844,000 bales of cotton to the Red Cross.

During the New Deal period, the chief measures used to reduce surplus stocks were export subsidies and purchases for various domestic relief programs. A 1935 amendment to the Agricultural Adjustment Act (Section 32) diverted 30 per cent of the revenue from customs receipts to the Department of Agriculture for price-support and surplus-removal operations. A large part of these funds was used for export subsidies, which reached a pre-war peak of \$47.2 million in the fiscal year 1940.

⁴ "The amounts of farm products taken off the U.S. market under the various foreign aid programs from 1941 through June 1952 ranged from \$4,779 million for wheat down to \$78 million for fertilizer and insecticides. The total in the 11 years was \$15,105 million."—Murray R. Benedict, *Can We Solve the Farm Problem?* (1955), p. 308.

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During the worst of the depression, large amounts of foodstuffs had been made available to the needy, first under the Federal Emergency Relief Administration and later through the Agricultural Adjustment Administration. The hog-slaughter campaign of 1933-34 put millions of pounds of pork and lard into relief channels. Surplus wheat was distributed not only to help feed needy families but also to supply farmers in drought areas with feed for animals. Bonuses were paid for diverting surplus foods to unaccustomed uses—feeding peanuts to cattle, for example, or converting hogs into grease. The national school lunch program was instituted in 1936 primarily to provide a new outlet for surplus foods.⁵ An experimental food stamp plan, put into effect in 1939, enabled families to purchase surplus foods in neighborhood stores at 50 per cent of the market price.

Congress, during and after World War II, enacted a number of measures intended to effect a reduction of stocks held by the Commodity Credit Corporation. The Surplus Property Act of 1944 authorized C.C.C. to export at competitive prices any farm commodity not in short supply. The Foreign Assistance Act of 1948 authorized sale of surplus commodities for foreign relief either at cost or at the domestic price, whichever was lower. Both measures in effect provided for sale of C.C.C. holdings abroad at a loss.

The Agricultural Act of 1949 gave C.C.C. authority to barter certain commodities for foreign strategic materials. The Mutual Security Act of 1953 empowered the President to use between \$100 million and \$250 million to buy surplus agricultural commodities to be sold for foreign currencies; the foreign currencies were to be credited to a revolving fund for purchase of military supplies.

Most of these programs were consolidated and expanded under provisions of the Agricultural Trade and Assistance Act of 1954, a measure whose stated purpose was to "promote the economic stability of American agriculture." The law was enacted as an emergency measure to operate for three years, but it has been extended twice and is currently due to expire on Dec. 31, 1959. Authorization for disposal of farm commodities for foreign currencies has

⁵ Federal assistance to the program was restricted originally to provision of surplus foods. When Congress made the program permanent in 1946, it authorized assistance in cash as well as food, and the emphasis shifted from surplus disposal to child nutrition.

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been increased from the figure of \$700 million fixed in 1954 to a present total of \$6.25 billion worth; authorized donations for foreign relief have been raised from \$300 million to \$800 million worth. The administration has asked Congress to extend the law for another three years and to make a further increase in the authorization for sales for foreign currencies.

EFFECT OF PRICE SUPPORTS ON SURPLUS ACCRUAL

At the heart of the great national debate on farm policy is the question whether the system of price supports keeps surplus accumulations from ruining the farmer or whether it aggravates the problem by encouraging the farmer to overproduce. Administration efforts to lower support levels and restore freer market conditions in agriculture are based on the latter premise. The President said in his recent farm message to Congress:

Clearly the existing price support program channels most of the dollars to those who store the surpluses and to relatively few producers of a few crops. It does little to help the farmers in greatest difficulty. . . . The control program doesn't control. Mandatory supports are at a level which so stimulates new technology and the flow of capital into production as to offset, in large part, the control effort.

Opponents of the administration contend that price supports are necessary, however, on the ground that it is impossible for the host of agricultural producers so to control output that the supply-demand ratio will yield an equitable return. They say that a drop in prices would only make farmers produce still more in an attempt to avoid a drop in income.

The administration nevertheless insists that mandatory controls, adopted in the first place to meet a depression emergency, are unsuited to the present high-level economy. Benson said recently:

[Agriculture] cannot race ahead toward expanded markets carrying on its back the dead weight of artificial pricing which destroys markets. It cannot seize the advantages of the new technology when it is handcuffed by unrealistic acreage allotments and marketing quotas. . . . We cannot price [surpluses] as if they were scarce and expect them to sell in abundance.⁶

The Secretary added, Feb. 25, 1959, that government controls on farm commodities belonged to a decadent system

⁶ Speech before National Council of Farmer Cooperatives, New Orleans, La., Jan. 13, 1959.

that had gone bankrupt. "Our problem now," he said, "is one of unbalance, not overproduction."⁷

Imbalance Between Supply and Demand

MAJOR OBSTACLES to the success of government efforts to bring supply and demand into balance have been the increasing productivity of agriculture and the limited flexibility of demand for food in generally prosperous times. Secretary Benson told the House Agriculture Committee on Feb. 10 that "Our nation's farm productivity is surging forward with great vigor in an irreversible and continuous technological revolution." He pointed out that this was never more evident than in 1958, when acreage restrictions on crops in surplus and the retirement of some 27 million acres from production under the soil bank program were insufficient to reverse the rising curve of farm output.

GREAT INCREASES IN AGRICULTURAL PRODUCTIVITY

Combined crop yields in 1958 were 11 per cent higher than ever before, and the new peak was established on the smallest planted acreage in 40 years. An enormous wheat harvest was grown on 20 million fewer acres than were harvested in 1949. Per acre yields of the four major feed crops set new records in 1958. Cotton farmers produced 30 million bales on 12½ million acres, compared with an output of 12 million bales on 45 million acres 30 years ago.

The Department of Agriculture anticipates an increase in egg production this year without an increase in the number of laying hens. The average cow now produces 6,300 pounds of milk a year, compared with 5,000 pounds in 1947. "Rates of increase in milk output per cow are not likely to fall off for some time," judging from the record of states which now have high averages.⁸

American agricultural output has increased steadily since 1870 (except for the drought years of the 1930s), but

⁷ Press conference at Newark, N. J. Benson predicted that controls on wheat would be terminated this year and that price supports on other commodities would be reduced to much lower levels.

⁸ Department of Agriculture, *The Demand and Price Situation*, November 1958, p. 29.

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until 1920 the increase was accompanied by a comparable rise in use of agricultural resources; more land was cultivated and more labor, animal and human, was invested. The significant changes leading to the present abundance have come in the past 40 years. Except for temporary increases in acreage during World War II, the total area of crop land for the nation has changed little since 1920. Development of new farm land in the West was offset by abandonment of farm acreage in the East.

Although nearly 80 million acres were removed from cultivation of major crops in the period 1953-58, total output continued to climb. An estimated 36 per cent gain between 1940 and 1956 required a rise of only 9 per cent in use of agricultural resources; the gain in efficiency amounted to 25 per cent, far outstripping productivity gains in industry. It has been estimated that \$7.5 billion in additional resources would have been required to produce the increased output of 1956 under conditions of farming prevailing in 1940.⁹

FACTORS RESPONSIBLE FOR HIGHER FARM YIELDS

The technological revolution in American agriculture consists of many things: introduction of new machinery; growth in size of farms devoted to specialized crops, which makes possible more efficient management; improvement and greater use of fertilizers, insecticides and weed-killers; development of new high-yield and disease-resistant seed; breeding of more fertile and faster-growing animals, conquest of animal diseases and improvement of animal feed; and the discovery of a host of improved methods of farming. At the same time, advances in food handling before marketing have added to supply by reducing waste.

Introduction of machinery on a large scale began in the early 1920s and was responsible for one-half the increase in agricultural output in the between-wars period. The more recent gains have been attributed chiefly to increased use of fertilizer. But the mechanical revolution is still in progress. Not only has the machine provided more efficient methods of cultivation and harvesting; by vastly reducing the need for draft animals, it has released an estimated 70 million acres of land, once devoted to feeding farm stock, for cultivation of crops for human use.

⁹B. T. Shaw (administrator, Agricultural Research Service), testimony before House Appropriations subcommittee, Feb. 4, 1958.

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Farmers today have more than three times as many field tractors and motor trucks as in 1940. Newer machines, like the field forage harvester and the pickup baler, are being used in growing numbers. New machinery is constantly being introduced for more efficient cultivation and, in particular, for harvesting of perishables where speed in gathering and preparing the crop for shipment is an important factor in reducing spoilage.

Giant tractors on large wheat farms make it possible to work the soil quickly after rain so as to prevent evaporation of moisture and thus ward off reduction of yield.¹⁰ Recent introduction of mechanical thinners on sugar beet farms will greatly reduce the need for human labor and leave more healthy plants standing than when thinning is done by hand.¹¹

Use of basic fertilizer elements has increased three and one-half times since 1940. Recently *Business Week* reported that large-scale wheat farmers had increased output from 12 bushels an acre to from 30 to 40 bushels by using liquid ammonia as a fertilizer. Development of hybrid varieties of corn, together with heavy application of fertilizer and adoption of other improved farming methods, are largely responsible for the huge corn yields. Higher milk, egg, and meat yields result from selective breeding and new feeding practices.

Although many of the major scientific advances in agriculture were made in the period between the two world wars, recent years have witnessed a more widespread application of new knowledge.¹² Research continues to disclose new ways of increasing yields. Current government research projects include efforts to develop aphid-resistant varieties of alfalfa, breed a new variety of cottonseed for use as animal food, improve chemical fruit thinning to reduce injury to foliage, and stimulate growth of more than 50 kinds of plants by spraying with gibberellic acid. Government researchers have discovered a new antibiotic which gives promise of controlling worm parasitism in livestock, and have found a chick-growth factor in egg yolk which holds promise of "improvement in broiler-production

¹⁰ "Machines Keep Crops Too Big," *Business Week*, Oct. 18, 1958, p. 105.

¹¹ Colorado State University Experiment Station, *Sugar Beet Labor in Northern Colorado* (September 1958), p. 78.

¹² Hog cholera once took as many as six million head a year; the disease is now controlled by immunization. Incidence of tuberculosis in cattle has been greatly reduced.

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efficiency as great as from any single discovery of recent years." ¹³ This is only a sampling of many research projects looking to greater yields in the future.

LIMITS ON DEMAND FOR AMERICAN FARM PRODUCTS

Agricultural productivity obviously has far outpaced growth of the farmer's market. The population of the United States has been increasing at a rate of about 1.8 per cent a year, but an individual's capacity to consume food, even on an extravagant basis, is limited. Department of Agriculture studies indicate "relatively small response of consumption [of farm products] to price and income changes," although "the fact that consumer demand is registered at the retail level complicates problems of measuring the nature of demand for products at the farm." ¹⁴ This is because the price of food purchased at retail includes not only the cost of the farm produce but also the costs of processing and marketing. The farmer last year received around 41c of each food dollar spent by the consumer and about 33c of the dollar spent for all farm products (including fiber and tobacco).

Consumer outlays for food go up with increased income, but much of the added expenditure is for highly processed, packaged and trimmed foods and for frozen concentrates and prepared mixes, a large part of whose price represents off-the-farm services. Consumption of food items like meat and dairy products and fresh fruit and vegetables is likely to be affected by price and income changes. But consumption of some foods has gone down in spite of increases in consumer income. Annual per capita consumption of grains and potatoes, for example, has fallen by 110 pounds since 1935-39, and Americans consume somewhat less fat today than they did 20 years ago. Use of cotton also has fallen, largely because of substitution of synthetic for natural fibers.

The disparity between production and consumption is most marked in the case of wheat. American farmers in 1909 produced 683 million bushels of wheat, of which 475 million was consumed by the population of 90 million persons. The wheat crop in 1958 was more than three times

¹³ Agriculture Department report to House Appropriations Committee, 1958.

¹⁴ G. T. Barton and E. F. Daly (Agricultural Research Service and Agricultural Marketing Service of Department of Agriculture), paper presented to Conference on Problems and Policies of American Agriculture, Iowa State College, Ames, Iowa, Oct. 27-31, 1955.

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as large, but the population, which had nearly doubled, consumed no more wheat than it had consumed in 1909. Annual per capita consumption fell in the last five decades from $5\frac{1}{4}$ bushels to $2\frac{3}{4}$ bushels.¹⁵

Long-Range View of Surplus Problem

SURPLUS CROPS have constituted only from 5 to 7 per cent of total agricultural production in recent years, but about four-fifths of the surplus has been concentrated in a few basic commodities such as wheat, corn, cotton, tobacco, and dairy products. It is apparent that if it were not for market limitations, farm output could be expanded tremendously within a short time and without putting additional acreage into production. Although American agriculture is the most productive in the world in terms of human labor expended, it is by no means the most productive in terms of yield per acre. Per acre yields are larger in some countries of Europe and Asia (especially Japan) where shortages of arable soil have compelled intensive cultivation.

DUBIOUS OUTLOOK FOR ABSORBING FARM SURPLUSES

In the long view, the productive capacity of the nation's agriculture is a great blessing, because it promises an abundance of food for a growing population. Projections of future supply and demand, however, indicate little hope that the country will be able to "eat its way" out of the surplus problem in the near future.

Studies of the prospects for raising domestic consumption take into consideration the greater amounts of food that might be consumed if income of the lowest economic groups in the population could be brought up to a level which would permit capacity consumption. The Conference on Economic Progress estimated that in a full-employment economy, per capita consumption of meat could be raised by 12 per cent, cotton by 10 per cent, and dairy products, fruits and vegetables by 9 per cent.¹⁶

¹⁵ Statement by Family Economics Bureau, Northwestern National Life Insurance Co., Aug. 26, 1958.

¹⁶ Conference on Economic Progress, *Toward a New Farm Program* (December 1958), p. 51.

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A Department of Agriculture study has estimated that, on the basis of certain assumptions,¹⁷ the demand for farm crops in 1975 will be 28 per cent larger than in 1956 (grains and potatoes up 26 per cent, fruits and vegetables 58 per cent, feed and seed 31 per cent, non-food crops 57 per cent). A 40 per cent increase is projected in the over-all demand for livestock in 1975 (meat animals up 47 per cent, dairy products 43 per cent, poultry 56 per cent, eggs 36 per cent).

To meet needs of this magnitude by 1975, we would need an average annual increase in total farm output about as large as that recorded during World War II and the immediate postwar years and more than double the long-term annual increase since 1910. . . . Our projected needs for agricultural products in 1975 can be met without any increase in technology beyond present know-how, and without resorting to such devices as upgrading of pastureland or increased reliance on direct food crops.¹⁸

Studies by the U.S. Agricultural Research Service indicate that crop yields attainable by 1975 will average about 40 per cent more than the average in the early and middle 1950s. The number of pounds of feed required to produce a pound of hog is expected to decrease by about 15 per cent during the next 16 years; 8 or 9 per cent less feed will be required to produce a pound of beef, 10 per cent less to produce a pound of milk, and 28 per cent less a pound of broiler chicken. It appears that the major problem of agriculture in the future will be to adjust resources to meet changes in demand for various products. Bringing total production up to necessary levels will present no difficulties.

OBSTACLES TO FEEDING OTHERS WITH U.S. SURPLUSES

American farm surpluses do not loom large when placed against current and future world food needs. The Food and Agriculture Organization of the United Nations estimates that one-half of the world's population is undernourished. The Population Reference Bureau recently observed that if all the surplus food in this country in 1957 had been distributed among the 1.8 billion hungry people of the world, it would have given each one of them no more than the equivalent of two teacupfuls of rice once in 17 days. If all the food in the world were distributed equally

¹⁷ Population in 1975 of 230 million; real consumer income 40 per cent above 1956; continuation of past consumption and economic growth trends; exports at average of early 1950s.

¹⁸ H. L. Stewart (Chief, Agricultural Adjustments Research Branch), Address, Agricultural Outlook Conference, Washington, D. C., Nov. 18, 1968.

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to each individual, "every living person would be on short rations."¹⁹

When World War II ended in 1945, per capita food production for the world as a whole was considerably lower than before the war. It was not until 1949 that production increases began to overtake population increases, and not until 1952-53 that per capita food production rose above prewar levels. The major increases, however, occurred in the highly developed countries, which piled up surpluses while millions remained underfed elsewhere.

The F.A.O. in 1953 proposed a program to promote better world distribution of foodstuffs by encouraging production within each country of commodities best suited to its resources and making provision for exchanges of surpluses with other countries. Member governments did not welcome the suggestion and the F.A.O. concluded that, although distribution remained "part of the hard core of unsolved problems, . . . increased domestic production . . . [must be] recognized as the basis of any improvement in food supplies in the underfed parts of the world."²⁰

Recent efforts of the international agency to assist underfed countries have concentrated on measures to improve agricultural resources and practices and make the countries more self-sufficient in food. Although exports, particularly from the United States, were termed "valuable in emergencies," the F.A.O. said it was "debatable whether this can be considered more than a partial solution of the problem."

Commercial food imports on an adequate scale would overstrain the currency resources of most of the less developed countries to an extent that would badly hamper their general economic development. Shipments under special terms . . . inevitably cause anxieties and difficulties to other exporters. . . . More fundamental still . . . is the possible impact of such imports on their [underdeveloped countries] own agricultural development.²¹

Productivity of agriculture in the underfed countries is restricted not only by primitive methods and lack of capital to improve agricultural resources, but also by weakness of distribution systems, lack of storage facilities, and lack of price supports during temporary periods of heavy

¹⁹ Population Reference Bureau, Inc., *Population Bulletin*, February 1959, p. 1.

²⁰ Food and Agriculture Organization, *Millions Still Go Hungry* (1957), p. 3.

²¹ Food and Agriculture Organization, *The State of Food and Agriculture 1955*, p. 53.

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supply. Sharp price drops during such periods destroy the incentive of farmers to increase production, especially if in periods of short supply prices are kept down by bringing in imports under special terms. "There is then a danger that a bare minimum will be produced for the market, that much of the country's agriculture will remain at a primitive subsistence stage, and that the whole economic development will be unbalanced."²²

Opinions differ on how well the food needs of a much larger population can be met. The number of people on the globe now totals 2.8 billion. If current growth rates continue, it will be 3.4 billion in ten years and nearly 6 billion by the end of the century.²³ Further improvement of public health might raise the totals.

The Population Reference Bureau estimates that each year's population increment requires the addition of some 47 million acres of new farm land or its equivalent. A United Nations report in 1957 said that "rough calculations" indicated that it would be necessary to increase the cereal supply by 300 million tons, or 43 per cent, in the next 25 years (by at least 80 per cent in the Near and Far East) to feed the world's people at a slightly improved level.²⁴ Another study suggested that world food production could be more than doubled by bringing all acreage yields up to the level prevailing in Western Europe.²⁵

²² *Ibid.*, p. 53.

²³ Population Reference Bureau estimates.

²⁴ United Nations Bureau of Social Affairs, *Report on the World Social Situation* (1957).

²⁵ Harrison Brown, *The Next Hundred Years* (1957), p. 61.



